

**Engineering Analysis
ConAgra Food
Morgan County
712-0004**

Introduction

On April 8, 2010, the Department received an Air Permit application from ConAgra Food located in Decatur, Alabama. The facility proposes to modify permit no. 712-0004-Z002 “Grain Elevator (Capacity 300 T/Hr) with Four (4) Baghouses”. An addendum was received on June 30, 2010 (NSPS applicability).

Facility Description

ConAgra is a flour mill and an animal feed mill. These mills are supplied by an on-site grain elevator. The facility is a synthetic minor source with respect to Title V, but minor for PSD consideration.

Project Description

ConAgra is proposing to modify operations at the Elevator source (Z002). The facility proposes to install additional wheat storage bins, wheat handling conveyors (fully enclosed drag conveyor system), and wheat receiving operations. The following is a list of the proposed change:

- Two new steel bins (550,000 bushel capacity, each) with aeration capability (New North Bin and New South Bin)
- One new truck receiving pit controlled by existing baghouse filter system and the controlled scenario described in the application
- One new rail receiving pit controlled by existing baghouse filter system and the controlled scenario described in the application
- New drag conveyors to serve new bins
- New drag conveyors to replace existing enclosed belt conveyors
- Modification of other conveyors to connect to the new bin controlled with existing baghouse filter systems
- Use of existing filters to control elevator emissions

The purpose of the project is to provide additional wheat storage capacity in order to store more wheat from local wheat sources, rather than purchasing the wheat from distant terminal grain elevators. The flour milling operations is considered the “bottleneck”, therefore, no increases in annual throughput is expected.

Emissions

The facility does not expect any increases in emissions since the flour milling capacity is not being modified. The facility expected to continue to meet the following production limitations:

Source Description	Allowable Emission Rate (lb/ton)	Allowable 12-month Throughput (tons)
Wheat Receiving	0.0078	430,000
Corn & Oats Receiving	0.0078	100,000
Drying –Wheat, Corn	0.0550	120,000

and Oats		
Wheat Handling	0.0340	1,032,000
Corn & Oats Handling	0.0340	240,000
Grain Shipping	0.0290	60,000

NSPS

This modification triggers applicability to the New Source Performance Standards Subpart DD, “Standards of Performance for Grain Elevators”. This process was not previously subject because was installed prior to Aug. 3, 1978. Below table listed the affected sources:

Proposed Source Number	NSPS “Affected Facility” Category	Plant Designation for Individual Source	Source Required to Meet NSPS Requirements	Baghouse Filter
Z002(a)	Truck Unloading Station	Existing Grain Receiving Pit (truck) - West Pit	No, no construction or modification	E2
Z002(b)		Proposed Grain Receiving Pit (truck) – East Pit	Yes	E2
Z002(c)	Truck Loading Station	Existing Grain Loadout Station (truck)	No, no construction or modification	N/A
Z002(d)		Proposed Grain Loadout Station (truck)	None proposed	N/A
Z002(e)	Barge and Ship Unloading Station	Existing Grain Receiving Station (barge)	No, no construction or modification	N/A
Z002(f)		No proposed changes	No, none proposed.	N/A
Z002(g)	Barge and Ship Loading Station	No current capability to load grain to barge	No.	N/A
Z002(h)		No proposed changes	No, none proposed	N/A
Z002(i)	Railcar Unloading Station	Existing Railcar Unloading station.	No, no construction or modification.	N/A
Z002(j)		Proposed Grain Receiving Pit (railcar) – Middle Pit	Yes	E2
Z002(k)	Railcar Loading Station	Existing Grain Loadout Station (railcar)	No, no construction or modification	N/A
Z002(l)		No proposed Change	No, none proposed	N/A
Z002(m)	Grain Handling Operations	Existing Grain Handling Operations	No, no construction or modification	N/A
Z002(n)		Proposed Grain Handling Operations	Yes	E2, E3

This table indicates that the following sources are subject to NSPS requirements:

- Z002(b), Proposed wheat receiving pit (trucks),
- Z002(j), Proposed wheat receiving pit (railcar), and
- Z002(n), Proposed new wheat handling operations.

NESHAP/Air Toxics/112(g)

This process is not subject to any National Emissions Standards for Hazardous Air Pollutants (NESHAP). Also this unit is not expected to emit any significant amount of HAPs; therefore, a 112(g) would not be applicable.

Recommendations

I recommend that permit no. 712-0004-Z002 be reissued to incorporate the requirements of NSPS Subpart DD. See the Appendix for suggested provisos.

Dewayne Gaines
Industrial Minerals Section
Energy Branch
Air Division

Date

Suggested Provisos

Permit No. 712-0004-Z002

1. This permit is issued on the basis of Rules and Regulations existing on the date of issuance. In the event additional Rules and Regulations are adopted, it shall be the permit holder's responsibility to comply with such rules.
2. This permit is not transferable. Upon sale or legal transfer, the new owner or operator must apply for a permit within 30 days.
3. A new permit application must be made for new sources, replacements, alterations or design changes which may result in the issuance of, or an increase in the issuance of, air contaminants, or the use of which may eliminate or reduce or control the issuance of air contaminants.
4. Each point of emission will be provided with sampling ports, ladders, platforms, and other safety equipment to facilitate testing performed in accordance with procedures established by Part 60 of Title 40 of the Code of Federal Regulations, as the same may be amended or revised.
5. In case of shutdown of air pollution control equipment for scheduled maintenance for a period greater than **8 hours**, the intent to shut down shall be reported to the Department at least 24 hours prior to the planned shutdown.
6. In the event there is a breakdown of equipment in such a manner as to cause increased emission of air contaminants for a period greater than **8 hours**, the person responsible for such equipment shall notify the Department within an additional 24 hours and provide a statement giving all pertinent facts, including the duration of the breakdown. The Department shall be notified when the breakdown has been corrected.
7. This process including all air pollution control devices and capture systems for which this permit is issued shall be maintained and operated at all times in a manner so as to minimize the emissions of air contaminants. Procedures for ensuring that the above equipment is properly operated and maintained so as to minimize the emission of air contaminants shall be established.
8. Submission of other reports regarding monitoring records, fuel analyses, operating rates, and equipment malfunctions may be required as authorized in the Department's air pollution control rules and regulations. The Department may require stack emission testing at any time.
9. Additions and revisions to the conditions of this Permit will be made, if necessary, to ensure that the Department's air pollution control rules and regulations are not violated.
10. Nothing in this permit or conditions thereto shall negate any authority granted to the Department pursuant to the Alabama Environmental Management Act or regulations issued thereunder.
11. Precautions to prevent fugitive dust shall be taken so that provisions of the Department's rules and regulations shall not be violated.

12. This permit is issued with the condition that, should obnoxious odors arising from the plant operations be verified by Air Division inspectors, measures to abate the odorous emissions shall be taken upon a determination by the Alabama Department of Environmental Management that these measures are technically and economically feasible.
13. The permittee shall not use as a defense in an enforcement action that maintaining compliance with conditions of this permit would have required halting or reducing the permitted activity.
14. The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege.
15. This unit shall not exceed the following emission rates based on lbs of PM-10 emitted per ton of material input nor the following through puts during any consecutive twelve (12) month period.

Source Description	Allowable Emission Rate (lb/ton)	Allowable through put (tpy)
Wheat Receiving	0.0078	430,000
Corn & Oats Receiving	0.0078	100,000
Drying - Wheat, Corn, Oats	0.0550	120,000
Wheat Handling	0.0340	1,032,000
Corn & Oats Handling	0.0340	240,000
Grain Shipping	0.0290	60,000

16. Daily records of through puts must be kept in permanent form suitable for inspection. The records shall be retained for at least two years and made available upon request.
17. The Department must be notified of any exceedance(s) of any through put limitation(s) as set forth by the provisions of this Air Permit by the 10th day of the month following the month in which the subject exceedance(s) occurred.
18. Modifications commenced after August 3, 1978, which includes Grain Receiving Pit (truck) – East Pit, Receiving Pit (railcar) – Middle Pit, and Grain Handling Operations, are subject to the Federal New Source Performance Standards (NSPS) as listed in 40 CFR 60 Subpart A, *General Provisions*.
19. Modifications commenced after August 3, 1978, which includes Grain Receiving Pit (truck) – East Pit, Receiving Pit (railcar) – Middle Pit, and Grain Handling Operations, are subject to the Federal New Source Performance Standards (NSPS) as listed in 40 CFR 60 Subpart DD, *Standards of Performance for Grain Elevators*.
20. On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility except a grain dryer any process emission which:
 - (a) Contains particulate matter in excess of 0.023 g/dscm (ca. 0.01 gr/dscf).

(b) Exhibits greater than 0 percent opacity.

21. On and after the 60th day of achieving the maximum production rate at which the affected facility will be operated, but no later than 180 days after initial startup, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere any fugitive emission from:
 - (a) Any individual truck unloading station, railcar unloading station, or railcar loading station, which exhibits greater than 5 percent opacity.
 - (b) Any grain handling operation which exhibits greater than 0 percent opacity.
 - (c) Any truck loading station which exhibits greater than 10 percent opacity.
22. In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b). Acceptable alternative methods and procedures are given in § 60.303(c).
23. The owner or operator shall determine compliance with the particulate matter standards in §60.302 as follows:
 - (a) Method 5 shall be used to determine the particulate matter concentration and the volumetric flow rate of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 1.70 dscm (60 dscf). The probe and filter holder shall be operated without heaters.
 - (b) Method 2 shall be used to determine the ventilation volumetric flow rate.
 - (c) Method 9 and the procedures in §60.11 shall be used to determine opacity.